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- as to the identity of the inventor (Rule 4.17(i)) for all designations
- as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii)) for the following designations AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW, ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG)
- as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii)) for all designations
- of inventorship (Rule 4.17(iv)) for US only

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- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

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For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: HERBAL EXTRACT COMPRISING A MIXTURE OF SAPONINS OBTAINED FROM SAPINDUS TRIFOLIATUS FOR ANTICONVULSANT ACTIVITY

(57) Abstract: A pharmaceutical composition comprising a herbal extract, comprising a mixture of saponins prepared from the pericarp of *Sapindus trifoliatus*, with binding affinities for the receptor sites viz. GABA-A agonist site, Glutamate-AMPA site, Glutamate-Kainate site, Glutamate-NMDA agonistic site, Glutamate-NMDA glycine (strychnine insensitive) site and Sodium channel (site 2). having major mediatory role in anticonvulsant activity. A process for preparation of the herbal extract; isolation of six pure compounds from the mixture of saponins in the aqueous extract; and a pharmaceutical composition comprising the said extract in combination with pharmaceutically acceptable additives. A method of prophylactic treatment of migraine through anticonvulsant activity of the composition by its administration through intranasal route.

# INTERNATIONAL SEARCH REPORT

International Application No  
PCT/IN 03/00289

**A. CLASSIFICATION OF SUBJECT MATTER**  
IPC 7 A61K35/78 A61P25/06

According to International Patent Classification (IPC) or to both national classification and IPC

**B. FIELDS SEARCHED**

Minimum documentation searched (classification system followed by classification symbols)  
IPC 7 A61K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, PAJ, WPI Data, BIOSIS, MEDLINE, EMBASE, CHEM ABS Data, SCISEARCH, PHARMAPROJECTS

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	CHATURVEDI A.K., ET AL.: "Anti-inflammatory and anticonvulsant properties of some natura plant triterpenoids" PHARMACOLOGICAL RESEARCH COMMUNICATIONS, vol. 8, no. 2, - 1976 pages 199-210, XP009027233 *cf. summary, page 200, 2nd para. bridging with page 201, 1st para., page 202, compounds I and II, page 207, 1st para., table 1*	1-19
Y	EP 0 767 177 A (NIPPON SHINYAKU CO LTD) 9 April 1997 (1997-04-09) *cf. abstract, page 2, lines 41-50, page 11, lines 24-30* --- -/--	1-19

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

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- \*A\* document defining the general state of the art which is not considered to be of particular relevance
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- \*Z\* document member of the same patent family

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## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	PATENT ABSTRACTS OF JAPAN vol. 015, no. 012 (C-0795), 10 January 1991 (1991-01-10) & JP 02 262510 A (INABATA KORYO KK), 25 October 1990 (1990-10-25) abstract	1-19
A	----- HIGUCHI R ET AL: "SEED SAPONINS OF AKEBIA QUINATA DECNE I. HEDERAGENIN 3-O-GLYCOSIDES" CHEMICAL AND PHARMACEUTICAL BULLETIN, TOKYO, JP, vol. 20, no. 9, 1 July 1972 (1972-07-01), pages 1935-1939, XP002068129 ISSN: 0009-2363 *cf. page 1935, abstract, lines 1-17, page 1938, 2nd para.*	1-19
A	----- KANCHANAPOOM T. ET AL.: "Acetylated triterpene saponins from the thai medicinal plant, Sapindus emarginatus" CHEMICAL & PHARMACEUTICAL BULLETIN, vol. 49, no. 9, September 2001 (2001-09), pages 1195-1197, XP001179756 japan *cf. abstract, introductory part*	1-19

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Information on patent family members

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